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VOL. XXXV, NO. 20, FEBRUARY 25, 1957 . . . *To Know This World, Its Life*

BERNARD G. SILBERSTEIN ©

Near Madrid, shepherds share a pasture with a windmill right out of Don Quixote

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paved roads, bridges, and aqueducts still standing attest the skill of Roman builders. Yet oft-conquered Spain remains sharply proud. Modern cities roar with life. But not far off, hunters vanish into desolate tracts with a good chance of bringing down a chamois, lynx, wolf, wild boar, deer, or even bear. Many streams flash with trout.

About twice the size of Oregon, Spain shares the Iberian Peninsula with little Portugal. Mountain chains ridge the land, giving it an average elevation of 2,000 feet above sea level. In Europe, only Switzerland and Austria are higher.

JUSTIN LOCKE

SUNNY FIELDS near Jaca, in the Pyrenees, spread beyond a bridge built by Romans

The almost encircling sea gives jobs to fishermen. They keep dinner tables supplied with various shellfish including oysters and three kinds of lobster. Tons of sea products arrive and disappear each morning at Madrid's fish market near the Toledo Gate. Mouths water over the turbot, a potbellied fish weighing as much as 40 pounds.

Most of Spain's nearly 29,000,000 inhabitants work small farms, hire out to large estates, tend fruit groves, or mind sheep and cattle. Olive culture takes up some 5,000,000 acres, providing the world with nearly half of its olive oil. While Portuguese neighbors search for uranium (see GSB January 28, 1957), Spaniards mine mercury, cobalt, manganese, copper, lead, zinc, and other minerals. Thriving cork oak forests, like Portugal's, provide millions of bottle stoppers.

UMI

AT first glance, the centuries seem to have gone unheeded in Spanish villages like Ansó, in the Pyrenees. Men still wear black trousers, laced around white bloomers. They tie round hats to their heads and rope sandals to their feet. Some women dress like nuns in somber cowls.

But changes have come to Spain. Four centuries ago Spanish axes rang in the New World, clearing ground for forts. Now, American bulldozers rumble in Spanish provinces, grading soil for air strips.

Sixteenth century Spain spread colonies afar. Its explorers paved the way for priests and scholars, for gold and glory and bitter rivalry with Britain. Modern Spain keeps track of its

JUSTIN LOCKE

SPAIN *The Land Of Surprises*

empire more easily. It counts a handful of quiet African lands—Spanish Sahara, Ifni, and Rio Muni. Spain's island possessions include Corisco, Elobey, Fernando Póo, and Annobón, all in the Gulf of Guinea, off Africa's west coast. The Canary and Balearic Islands are considered part of Spain proper.

Instead of sending conquistadores to the Americas, Spain welcomes American engineers. The new air bases, expected to be finished in 1958, assure protection for Spain. American airmen will funnel in dollars to bolster Spanish economy. In return, the airmen will get a valuable glimpse of history and breathe a mellow atmosphere of sunny meadows lined by poplar trees, of narrow-laned villages with age-old memories.

Spain has been called the "Land of the Unexpected." It combines rich orchards and vineyards with grim steppes and snow-crowned mountains. Crumbling castles, scowling from hilltops, recall 800 years of Moorish occupation. Stone-

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Drain the Atlantic and this is what you would see

(C) NGS MAP

The Mountains You Dive To Climb

HUMAN eyes see only the topmost peaks of the world's greatest mountain range. Most of 10,000-mile-long Mid-Atlantic Ridge lies under hundreds of fathoms of salt water. Its tallest summit breaks surface to form the island of Pico in the Azores. Pico rises a modest 7,615 feet above sea level. But it's the crest of a subsurface monster looming 24,000 feet from the ocean floor.

A British vessel, HMS *Challenger*, discovered the Ridge in 1873. More recently, scientists have studied its contours. The National Geographic Magazines of September, 1948, and November, 1949, carried stories of two expeditions, jointly sponsored by The Society, Woods Hole (Massachusetts) Oceanographic Institution, and Columbia University, which traced the Ridge with dredges and sounding devices. Expedition leader Maurice Ewing told of deep gorges that seemed to flank the mountain chain.

Later investigation seems to show that these gorges form a continuous trench down the middle of the Ridge. In fact, the cleft is part of a 45,000-mile system of rift valleys (mostly underwater) that ring the earth like cracks in an old rubber ball. Africa's Great Rift Valley is one branch.—E.P.

UMI

NATIONAL GEOGRAPHIC PHOTOGRAPHER LUIS MARDEN

Residents of Madrid, the capital, must have wardrobes for burning summer heat, and biting winter cold. The more than 1,000-year-old city occupies a high level plateau equidistant between the Mediterranean, the Atlantic, and the Bay of Biscay. Inhabitants and visitors delight in its fountains, memorials, libraries, and museums. Traffic honks along the Gran Vía (Broadway), left, the main shopping boulevard. The Royal Armory contains fabulous collections of armor and weapons, nostalgic reminders of national glory no Spanish school child is allowed to forget.

Landlocked Madrid numbers more than a million people. Barcelona, almost as big, provides a gateway on the northeast coast for exports of cork, olives, wines, and fruits.

Whether city dwellers, mountain folk, fishermen, or farmers, Spaniards share a universal enthusiasm. They bellow their songs, flock to their bullfights, roar with laughter, dissolve in misery. Endlessly hard working, they manage to brighten the day by dancing to impromptu music. Their fandangos and boleros have traveled the world. The April, 1950, *National Geographic* article on Spain tells of Gypsy dances.

The bounding Basque at right, costumed for the goblet dance, is about to land on a glass of wine, then leap off it without spilling a drop. He is a mountaineer of the sheep country along the French border. He would hardly understand the problems and ambitions of a sailor from Cádiz, or an artist from Seville. But, being Spanish, they would cheer his dance. And he would join in theirs.—

JEAN VELEZ

Heads up, migrating zebras test the wind for the scent of lions. Trailing youngsters learn about danger, the first lesson they learn—and also the last experience of their lives

under thousands of wild hoofs. A long line of zebras strings along the horizon. Saucy little Thomson gazelles, flicking their black tails, race for the joy of it, then pause to graze (right). A lone wildebeest (left), ungainly animal seemingly made of spare parts, separates from a herd of hundreds. As far as the eye can see, animals mass on the wide, grassy plains. Zebras, wildebeests and various gazelles are principals in the yearly drama. Other animals and birds watch the parade, prey on it, or flee from it. Giraffes browse among acacia branches. A rhino shuffles into a gorge. Hartebeest and topi take sudden flight from danger.

Families of ostriches file past like ballet dancers. Hyenas skulk through tall grass. A cheetah bounds off at 70 miles an hour.

As herds move, life and death keep pace. The newborn wildebeest fights for a foothold. A startled herd threatens to trample it. Five old bulls shoulder in to form a protective wall. Minutes later the baby totters off behind its mother. A lame gazelle drops behind. Buzzards circle patiently. When sunset has settled into cool, blue dusk a lioness stalks the cripple. Her two cubs watch the quick kill.

Sounds continue, far into the African night —the cough of a leopard, the frantic "quaag quaag" of a zebra, hoofs pounding across the Serengeti Plain.—J.A.

PHOTOGRAPHS BY FRED A. WARDENBURG

FRED A. WARDENBURG

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Serengeti Spectacle

THE tawny cats at left stretch lazily in the warmth of Africa's midday sun. Powerful paws curl with deceptive gentleness. Beyond, a yearly drama unfolds on the vast Serengeti Plain of Tanganyika—the world's greatest migration of animals. The lions will play their part.

The Serengeti Plain forms part of the highlands of Tanganyika Territory. Splendid and wild, it sprawls from a chain of volcanic mountains to the eastern shores of Lake Victoria. No paved roads cross here, no houses, telephone poles, or signboards intrude. Aside from wandering tribes of Masai (above), this seems exclusively a kingdom of animals.

Each year, usually starting in January, animals begin to drift through huge Serengeti National Park, where humans may still view the pageant and find it worth the hardships of getting there. The rains are still ahead. Animals seek water, fresh grazing. Grass, yellowed and dusty, flattens

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NATIONAL GEOGRAPHIC PHOTOGRAPHER B. ANTHONY STEWART

Even pure Hawaiians were immigrants—Polynesians who sailed here in star-guided canoes, perhaps 1,000 years before Columbus found America. Their greetings to white strangers were not always as warm as they are today. Natives killed Capt. James Cook, English discoverer of the Islands.

Residents often live in hillside suburbs where they kick off shoes indoors. To them, Honolulu means office, church, school. When time permits, they take a dip at Waikiki, or one of the better surfing beaches on Oahu's western shore. For tourists, the city means flowers, weather, music. And Waikiki—positively. Offshore, lithe Hawaiians performing for fun ride outriggers like broncos down steep breakers. Surfboarders hurtle past, streaming wakes of pluming water. From somewhere down the beach stringed instruments strike plaintive tunes.

UNITED AIR LINES

Sheltering Waikiki Beach, Diamond Head looks down on surf-riding outrigger canoes

UMI

CASTLE AND COOK, PHOTO HAWAII

Honolulu Aloha

Seventh in Cities of the World Series

TO anyone claiming it isn't a sight (see above) say "hoomalimali." That's Hawaiian for "tell it to the Marines."

Your ship has crossed 2,400 miles of sea southwesterly from California to Honolulu. It's a bet you smell flowers before you see land, or tingle to the musical *aloha*, which says "hello" as well as "goodbye." Island ginger flowers, hibiscus, anthurium, many others, caress the air like gardenias at a junior prom.

The next wonder is Hawaiian weather. Daily temperatures average 75 degrees. Season slips into season unidentified except on calendars. Tropical rains dampen fun? No one minds. They're called "liquid sunshine" and are needed for sugar cane and pineapple crops that sweeten the island's economy.

But already another marvel unfolds—Honolulu itself, capital of the Territory of Hawaii, seaport city on the island of Oahu. Its front door is the sea. Mountains fill its back yard. Millions of dollars reaped from pineapple, sugar, and tourists fill vaults in Merchant Street (below) Honolulu's Wall Street. Along other business thoroughfares roars rush-hour traffic. Surging crowds recall New York. But most faces are oriental. Japanese, Chinese, Filipino ancestry has blended with English and American in this Pacific melting pot.

NATIONAL GEOGRAPHIC PHOTOGRAPHER B. ANTHONY STEWART

CHINESE CHRISTIANS worship in this pagodalike church on Honolulu's King Street. Missionaries helped settle the city. The National Geographic of May, 1954, describes it

HAWAIIAN TUNA PACKERS, LTD.

Sun shadows slant on massive Diamond Head and sharpen white sails of an idling canoe.

Surrounded by scenic richness, Honolulu's water front still finds time for daily labors. Burly dockers unload ships beneath the Aloha Tower. Japanese fishermen heave fresh tuna from the holds of their vessels, left. Trucks roll to the docks with cans of pineapple.

But many festival days offer an excuse for swimming and sun-bathing. Sometimes, 25,000 fans watch high school football battled in tropical temperature. Many a back punts barefoot.

Few modern hulas are authentic dances. Grass skirts are made in New Jersey. Ukuleles come from Pennsylvania. Anyhow, the dancing is *maikai*. The word means "good."—S.H.